

## **REMARKS**

Reconsideration of the application is requested in view of the remarks below. Claims 1-26 are pending.

### **Objection**

The Office Action objected to the specification at page 5, line 21. In view of the comments, the Specification has been amended from "FIGURES" to -- DRAWINGS--. Accordingly, in view of the modifications and remarks above, the objection is believed to be overcome.

### **Rejections Under 35 USC 112, second paragraph**

The Office Action rejected Claims 1-8, 25 and 26 under 35 USC §112, second paragraph as indefinite. The rejection should be withdrawn in view of the modifications above and remarks below.

a) The Office Action rejected Claim 1 for reciting an improper Markush group. Claim 1 has been amended to include --and-- as suggested by the Examiner to properly recite the Markush group. In view of the modifications above, the rejection is believed to be overcome. Reconsideration is requested

b) The Office Action rejected Claim 2 as indefinite, improper and failing to properly point out the invention in stating an amount which is based on the method of application rather than the claimed conditioning agent.

Dependent Claim 2 is directed to the conditioning agent of Claim 1, wherein the polysuccinimide is present in an amount ranging from about 0.1 to about 10,000 g/m<sup>3</sup> to the water component. The limitation of the amount is not based on the method of application, as alleged in the Office Action, but is based on a measurement reference to a cubic meter (m<sup>3</sup>) of the water component, and the cubic meter of the water component is not a variable amount. In *Orthokinetics, Inc. v. Safety Travels Chairs, Inc.*, 806 F.2d 1565 (Fed. Cir. 1986), the court indicated that a claim limitation specifying the dimensions of the pediatric wheelchair be "so dimensioned as to be insertable through the space between the doorframe of an automobile and one of the seats" was definite. In Claim 2 of Applicants' invention, Mo-6569

the amount of polysuccinimide is measured in an amount from about 0.1 to 10,000 g relative to a fixed amount of a cubic meter of water. The amount of water merely serves to measure how much polysuccinimide is used in the conditioning agent.

In view of the remarks above, the rejection is believed overcome.

Reconsideration is requested.

c) The Office Action rejected Claims 25 and 26 as failing to further limit Claim 1. MPEP 2111.02 expressly states that "a claim preamble has the import that the claim as a whole suggests for it." The MPEP expressly states that "[i]f the claim preamble, when read in light of the context of the entire claim, recites limitations of the claim, or, if the claim preamble is necessary to give life, meaning, and vitality to the claim, then the preamble should be construed as if in the balance of the claim. In view of these remarks, the rejection is believed overcome. Reconsideration is requested.

#### **Rejection Under 35 USC 103**

1. Rejection Under U.S.C. 35 USC §103 as unpatentable over U.S. Patent 4,561,981 (Characklis) in view of U.S. Patent 5,371,180 (Groth et al.).

The Office Action rejected Claims 1-8, 25 and 26 under 35 USC 102 as unpatentable over Characklis in view of Groth et al. The rejection should be withdrawn in view of the remarks below.

It is well-established that in a sense, virtually all inventions are combinations of old elements (*In re Rouffet*, 47 USPQ2d 1453, 1457), and that the USPTO may often find every element of a claimed invention in the prior art. *In re Rouffet*, 47 USPQ2d 1457. If identification of each claimed element in the prior art were sufficient to negate patentability, very few patents would ever issue. *In re Rouffet* at 1457. It is also well established that to establish a *prima facie* case of obviousness, the USPTO must satisfy all of the following requirements. First, the prior art relied upon, coupled with the knowledge generally available in the art at the time of the invention, must contain some suggestion or incentive that would have motivated the skilled artisan to modify a reference or to combine references. *In re Fine*, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). Second, the proposed modification must have had a reasonable expectation of success, as determined from the vantage point of one of

ordinary skill in the art at the time the invention was made. *Amgen v. Chugai Pharmaceutical Co.* 18 USPQ 2d 1016, 1023 (Fed Cir, 1991), *cert. denied* 502 U.S. 856 (1991). Third, the prior art reference or combination of references must teach or suggest all of the limitations of the claims. *In re Wilson*, 165 USPQ 494, 496, (CCPA 1970).

Applicants' invention relates to a conditioning agent for conditioning a water component selected from the group consisting of standing water systems and flowing water systems. The conditioning agent includes a component selected from the group consisting of an active content of polysuccinimide (PSI), partial hydrolysates of polysuccinimide, copolymers of polysuccinimide, and mixtures thereof in combination with fatty acids or their derivatives. In Applicants' invention, although a component of an active content, for example, PSI has no ionic functionalization, and therefore is almost not soluble in water, the component reacts with water and dissociation of polymer functions can occur. The water changes the neutral succinimide-units in the polymer chain into acidic reacting amic-acid-segments. This reaction also may be accelerated with bases.

Characklis discloses microencapsulating of fouling control chemicals in a slow release capsule (see Abstract). In Characklis, the slow release capsule is used to control the release of the chemical into the system (col. 2, lines 23-25). As discussed above, Applicants' invention is directed to a conditioning agent including a component of an active content that has no ionic functionalization, and therefore is almost not soluble in water. Thus, in Applicants' invention a slow release of the component occurs, and use of microencapsulation is not necessary to provide a slow release. Characklis is fundamentally different from Applicants' invention. Characklis teaches that the release of a chemical is controlled using the microcapsule; the microcapsule is absorbed by the fouling deposit, and then the chemical is released (col. 2, lines 44-46). In fact, Characklis teaches away from Applicants' invention because the microencapsulation is necessary to control the release of chemicals into a system.

Regarding Groth et al., a process for the preparation of polysuccinimide and polyaspartic acid is disclosed, but a water conditioning agent including a component of an active content of, for example, PSI and water is not taught or suggested.

Rather, in Groth et al., the hydrolysis of PSI is merely used to prepare polyaspartic acid. In fact, Groth et al does not teach or suggest a conditioning agent as a slow-release depot.

Further, the Office Action indicates that Groth et al. (column 4, lines 25-28) teaches...many useful functions i.e., dispersing agent, sequestering agent, scale inhibitor, etc. However, the uses described in Groth et al. are directed to problems associated with reactions that have already occurred. In Applicants' invention the conditioning agent can minimize problems before occurrence (Specification, page 6, lines 28-30). Further, Groth et al. discloses polyaspartic acid that would be washed away and would not be utilized in a conditioning agent to self decompose via hydrolyzation. For example in Applicants' invention, the component of an active content causes the conditioning agent to prevent growth of crystallization nuclei of deposits and/or to prevent the formation of hard deposits (Specification, page 6, lines 25-27). Therefore, in Applicants' invention, the conditioning agent including the component of an active content provides a slow release that is completely different than the uncontrolled release in Groth et al.

Accordingly, one of ordinary skill in the art following the teachings of Characklis, singly or in combination with Groth et al., would not have been motivated to modify Characklis and make Applicants' invention. Reconsideration is requested.

In view of the foregoing amendments and remarks, allowance of the pending claims is earnestly requested.

Respectfully submitted,

By   
Diderico van Eyl  
Attorney for Applicants  
Reg. No. 38,641

Bayer Chemicals Corporation  
100 Bayer Road  
Pittsburgh, Pennsylvania 15205-9741  
(412) 777-3069  
FACSIMILE PHONE NUMBER:  
(412) 777-2612

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